

**STATE OF DELAWARE
REGULATIONS GOVERNING
UNDERGROUND INJECTION CONTROL**

(Parts 122, 124 and 146.)

Department of Natural Resources and Environmental Control

Effective: August 15, 1983.

PART 122 - STATE ADMINISTERED UNDERGROUND INJECTION CONTROL PROGRAM

Subpart A - Definitions and General Program Requirements

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Authority: Delaware Environmental Protection Act, 7 Del. C. Ch. 60.

§122.1 Program Requirements

(a) Coverage. Subpart A of Part 122 deals with state administration of the UIC program. First, it provides definitions for terms used in the regulations. Second, Subpart A contains basic program requirements applicable to state administration of the program, such as application requirements, standard permit conditions, and grounds for modification and termination of permits.

(b) Structure. The sequence of sections within each of the subparts of Part 122 has been rearranged for logic and consistency and to provide a discernible "map" for proceeding through the regulations. Each subpart of Part 122 includes three types of provisions: (1) Orientation material such as the purpose and scope of program, prohibitions, and the classification of injection wells; (2) the ways in which activities covered by the program are authorized, either through application for a permit or by permit substitutes (such as authorization by rule); and (3) information on how conditions are incorporated into permits--first, the conditions that do vary from permit to permit, and then information on how to calculate or specify conditions which do vary from permit to permit. In addition, (4) Subpart A contains sections on the effect of having a permit, such as the extent of the protection a permit provides, how it is reviewed, and when it can be modified or terminated. The regulations have been organized to follow this sequence.

(c) Authority. The Permit Program is authorized by 7 Del. C. §6003 and §6010.

(d) Public participation. This rule establishes the requirements for public participation in State permit issuance, enforcement, and related variance proceedings; and in the approval of State UIC program. These requirements carry out the purposes of the public participation requirements of 40 CFR Part 25 (Public Participation), and supersede the requirements of that Part as they apply to actions covered under Parts 122 and 124.

§122.2 Purpose and Scope of Part 122.

Subpart A of Part 122 contains definitions (§122.3) and basic permitting requirements (§§122.4 through 122.34).

§122.3 Definitions.

The following definitions apply to Parts 122, 124, and 146. Terms not defined in this section have the meaning given by the appropriate Act. When a defined term appears in a definition, the defined term is sometimes placed within quotation marks as an aid to readers.

Abandoned well means a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes.

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Application means the DNREC standard forms for applying for a permit, including any additions, revisions or modifications to the forms.

Appropriate Act and regulations means the Delaware Environmental Protection Act (DEPA) or Safe Drinking Water Act (SDWA) and applicable regulations promulgated under those statutes.

Approved program or approved State means a State or interstate program which has been approved or authorized by EPA.

Aquifer means a geological "formation", group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

Area of review means the area surrounding an injection well described according to the criteria set forth in §146.06, or in the case of an area permit, the project area plus a circumscribing area the width of which is either 1/4 of a mile or a number calculated according to the criteria set forth in §146.06.

Casing means a pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole.

Catastrophic collapse means the sudden or utter failure of overlying "strata" caused by removal of underlying materials.

Cementing means the operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing.

Confining bed means a body of impermeable or distinctly less permeable material stratigraphically adjacent to one or more aquifers.

Confining zone means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone.

Conventional mine means an open pit or underground excavation for the production of minerals.

Contaminant means any physical, chemical, biological, or radiological substance or matter in water.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act. Amendments of 1972) Pub.L. 92-500, as amended by Pub.L. 95-217 and Pub.L. 95-576: 33 U.S.C. §1251 et seq.

Delaware Environmental Protection Act ("DEPA") means the State of Delaware Environmental Protection Act under 7 Del. C. Ch. 60.

DEPA means the Delaware Environmental Protection Act.

Department of Natural Resources and Environmental Control ("DNREC") means the State of Delaware Department of Natural Resources and Environmental Control.

DNREC means the Department of Natural Resources and Environmental Control.

Disposal well means a well used for the disposal of waste into a subsurface stratum.

Draft permit means a document prepared under §124.5 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." A notice of intent to terminate a permit and a notice of intent to deny a permit as discussed in §124.4 are types of "draft permits." A denial of a request for modification, revocation and reissuance, or termination, as discussed in

§124.4 is not a "draft permit." A "proposed permit" is not a "draft permit."

Drilling mud means a heavy suspension used in drilling an "injection well," introduced down the drill pipe and through the drill bit.

Effective date of a UIC program means the date that a State UIC program is approved or established by the Administrator.

Emergency permit means a UIC "permit" issued in accordance with §122.30.

Environmental Protection Agency ("EPA") means the United States Environmental Protection Agency.

EPA means the United States "Environmental Protection Agency."

Exempted aquifer means an "aquifer" or its portion that meets the criteria in the definition of "underground source of drinking water" but which has been exempted according to the procedures in §122.25(b).

Existing injection well means an "injection well" other than a "new injection well."

Experimental technology means a technology which has not been proven feasible under the conditions in which it is being tested.

Facility or activity means any "injection well" activity, or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the UIC program.

Fault means a surface or zone of rock fracture along which there has been displacement.

Flow rate means the volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel.

Fluid means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.

Formation means a body of rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.

Formation fluid means "fluid" present in a "formation" under natural conditions as opposed to introduced fluids, such as "drilling mud."

Generator means any person, by site location, whose act or process produces hazardous waste identified or listed in Part 261 of the Delaware

Regulations Governing Hazardous Waste Program.

Ground water means any water naturally found under the surface of the earth.

Hazardous waste means a hazardous waste as defined in 40 CFR §261.3.

Hazardous Waste Management facility ("HWM facility") means all contiguous land, and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combination of them).

HWM facility means "Hazardous Waste Management facility."

Injection well means a "well" into which "fluids" are being injected.

Injection zone means a geological "formation," group of formations, or part of a formation receiving fluids through a "well."

Interstate agency means an agency of two or more States established by or under an agreement or compact approved by the Congress, or any other agency of two or more States having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator under the "appropriate Act and regulations."

Lithology means the description of rocks on the basis of their physical and chemical characteristics.

Major facility means any UIC "facility or activity" classified as such by the Regional Administrator in conjunction with the Secretary.

New injection well means a "well" which began injection after a UIC program for the State applicable to the well is approved.

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the UIC program.

Packer means a device lowered into a well to produce a fluid-tight seal within the casing.

Permit means an authorization, license, or equivalent control document, issued by DNREC to implement the requirements of this Part and Part 124. "Permit" includes UIC emergency permit (§122.30). Permit does not include any permit which has not yet been the subject of

final agency action, such as a "draft permit" or a "proposed permit."

Person means an individual, association, institute, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Plugging means the act or process of stopping the flow of water, oil, or gas into or out of a formation through a borehole or well penetrating that formation.

Plugging record means a systematic listing of permanent or temporary abandonment of water, oil, gas, test, exploration and waste injection wells, and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures.

POTW means "publicly owned treatment works."

Pressure means the total load or force per unit area acting on a surface.

Project means a group of wells in a single operation.

Public owned treatment works ("POTW") means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a "State" or "municipality." This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Radioactive waste means any waste which contains radioactive material in concentrations which exceed those listed in 10 CFR Part 20, Appendix B, Table II, Column 2.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub.L. 94-580, as amended by Pub.L. 95-609, 42 U.S.C. 6901 et. seq.).

Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.

Schedule of compliance means a schedule of remedial measures included in a "permit,"

including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations."

SDWA means the Safe Drinking Water Act (Pub.L. 95-523, as amended by Pub.L. 95-1900; 42 U.S.C. §300f et seq.).

Secretary means the Secretary of the Department of Natural Resources and Environmental Control or his delegated representative.

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

Sole or principal source aquifer means an aquifer which has been designated by the Secretary pursuant to 7 Del. C. Ch. 60.

State/EPA Agreement means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and program.

Stratum (plural strata) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.

Subsidence means the lowering of the natural land surface in response to: Earth movements; lowering of fluid pressure; removal of underlying supporting material by mining or solution of solids, either artificially or from natural causes; compaction due to wetting (Hydrocompaction); oxidation of organic matter in soils; or added load on the land surface.

Surface casing means the first string of well casing to be installed in the well.

Total dissolved solids ("TDS") means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR Part 136.

Treatment means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any "hazardous waste" so as to neutralize such wastes, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

UIC means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved program."

Underground injection means a "well injection."

Underground source of drinking water (USDW) means an aquifer or its portion:

(1)(i) Which supplies any public water system; or

(ii) Which contains a sufficient quantity of ground water to supply a public water system; and

(A) Currently supplies drinking water for human consumption; or

(B) Contains fewer than 10,000 mg/l total dissolved solids; and

(2) Which is not an exempted aquifer.

USDW means "underground source of drinking water."

Well means a bored, drilled or driven shaft, or a dug hole, whose depth is greater than the largest surface dimension.

Well injection means the subsurface emplacement of "fluids" through a bored, drilled, or driven "well" or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

Well plug means a watertight and gastight seal installed in a borehole or well to prevent movement of fluids.

Well stimulation means several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for wastewater to move more readily into the formation, and includes (1) surging, (2) jetting, (3) blasting, (4) acidizing, (5) hydraulic fracturing.

Well monitoring means the measurement, by on-site instruments or laboratory methods, of the quality of water in a well.

§122.4 Application for a permit

(a) Permit application. Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit an application to the Secretary as described in this section and in §122.28. Procedures for applications, issuance and administration of emergency permits are found exclusively in §122.30.

(b) Who applies? When a facility or activity is owned by one person, but is operated by another person, it is the operator's duty to obtain a permit. The owner must also sign the permit application.

(c) Completeness. The Secretary shall not issue a permit before receiving a complete application for a permit under this program except for emergency permits. An application for a permit is complete when the Secretary receives an application form and any supplemental information which are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity.

(d) Information Requirements. All applicants for UIC permits shall provide the following information to the Secretary, using the application form provided by the Secretary (additional information required of applicants is set forth in §122.28).

(1) The activities conducted by the applicant which require it to obtain permits under UIC.

(2) Name, mailing address, and location of the facility for which the application is submitted.

(3) Up to four SIC codes which best reflect the principal products or services provided by the facility.

(4) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public or other entity.

(5) A listing of all permits or construction approvals received or applied for under the UIC program.

(6) A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area.

(7) A brief description of the nature of the business.

(e) Recordkeeping. Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under §§122.4(d) and 122.28 for a period of at least 3 years from the date the application is signed.

§122.6 Signatories to permit applications and reports.

(1) Applications. All permit applications shall be signed as follows:

(1) For a corporation: by a principal executive officer of at least the level of vice-president;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively, or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) Reports. All reports required by permits and other information requested by the Secretary shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) The written authorization is submitted to the Secretary.

(c) Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Secretary prior to or together with any reports, information or applications to be signed by an authorized representative.

(d) Certification. Any person signing a document under paragraphs (a) or (b) of this section shall make the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

§122.7 Conditions applicable to all permits.

The following conditions apply to all UIC permits. For additional conditions applicable to all permits for the UIC program, see section 122.31. All conditions applicable to all permits, and all additional conditions applicable to all permits for the program shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit.

(a) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the appropriate Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(b) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

(c) Duty to halt or reduce activity. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) Duty to mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

(e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment

and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operator of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

(f) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(g) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

(h) Duty to provide information. The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this permit.

(i) Inspection and entry. The permittee shall allow the Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- (2) Have access to any copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate Act, any substances or parameters at any location.

(j) Monitoring and records.

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Secretary at any time.

(3) Records of monitoring information shall include:

- (i) The date, exact place, and time of sampling or measurements;
- (ii) The individual(s) who performed the sampling or measurements;
- (iii) The date(s) analyses were performed;
- (iv) The individual(s) who performed the analyses;
- (v) The analytical techniques or methods used; and
- (vi) The results of such analyses.

(k) Signatory requirement. All applications, reports, or information submitted to the Secretary shall be signed and certified. (See §122.6)

(1) Reporting requirements. (1) Planned changes. The permittee shall give notice to the Secretary as soon as possible of any planned physical alterations or additions to the permitted facility.

(2) Anticipated noncompliance. The permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(3) Transfers. This permit is not transferable to any person except after notice to the Secretary. The Secretary may require modification or revocation and reissuance of the permit to change the name of the permittee and

incorporate such other requirements as may be necessary under the appropriate Act. (See §122.14)

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(5) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(6) Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(7) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (1)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (1)(6) of this section.

(8) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Secretary, it shall promptly submit such facts or information.

§122.8 Establishing permit conditions.

In addition to conditions required in all permits for the UIC program (§122.31), the Secretary shall establish conditions in permits for the program, as required on a case-by-case basis, to provide for and assure compliance with all

applicable requirements of the appropriate Act and regulations.

§122.9 Duration of permits.

(a) UIC permits for Class I and Class V wells shall be effective for a fixed term not to exceed 10 years.

(b) The term of a permit shall not be extended by modification beyond the maximum duration specified in this section.

(c) The Secretary may issue any permit for a duration that is less than the full allowable term under this section.

§122.10 Schedules of compliance.

(a) General. The permit may, when appropriate, specify a schedule of compliance leading to compliance with the appropriate Act and regulations.

(1) Time for compliance. Any schedules of compliance under this section shall require compliance as soon as possible. It shall be no later than 3 years after the effective date of the permit.

(2) Interim dates. Except as provided in paragraph (b)(1)(ii) of this section, if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement. The time between interim dates shall not exceed 1 year.

(3) Reporting. A UIC permit shall be written to require that if paragraph (a)(1) of this section is applicable, progress reports be submitted no later than 30 days following each interim date and the final date of compliance.

(b) Alternative schedules of compliance. A UIC permit applicant or permittee may cease conducting regulated activities (by plugging and abandonment for UIC) rather than continue to operate and meet permit requirements as follows:

(1) If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued:

(i) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or

- (ii) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.
- (2) If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit shall contain a schedule leading to termination which will ensure timely compliance with applicable requirements no later than the statutory deadline.
- (3) If the permittee is undecided whether to cease conducting regulated activities, the Director may issue or modify a permit to contain two schedules as follows:
 - (i) Both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities;
 - (ii) One schedule shall lead to timely compliance with applicable requirements no later than the statutory deadline;
 - (iii) The second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements no later than the statutory deadline.
 - (iv) Each permit containing two schedules shall include a requirement that after the permittee has made a final decision under paragraph (b)(3)(i) of this section it shall follow the schedule leading to compliance if the decision is to continue conducting regulated activities, and follow the schedule leading to termination if the decision is to cease conducting regulated activities.
- (4) The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the Secretary, such as a resolution of the board of directors of a corporation.

§122.11 Requirements for recording and reporting of monitoring results.

All permits shall specify:

- (a) Requirements concerning the proper use, maintenance, and installation, when appropriate,

of monitoring equipment or methods (including biological monitoring methods when appropriate);

- (b) Required monitoring including type, intervals, and frequency sufficient to data which are representative of the monitored activity including, when appropriate, continuous monitoring;

- (c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in Part 146. Reporting shall be no less frequent than specified in the above regulations.

§122.12 Considerations under Federal law.

Permits shall be issued in a manner and shall contain conditions consistent with requirements of applicable Federal laws.

§122.13 Effect of a permit.

- (a) Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Part C of SDWA. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in §§122.15 and 122.16.

- (b) The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.

- (c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

§122.14 Transfer of permits.

- (a) Transfers by modification. Except as provided in paragraph (b) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under §122.15(b)(2)), or a minor modification made (under §122.17(d)), to identify the new permittee and incorporate such other requirements as may be necessary under the appropriate Act.

- (b) Automatic transfers. As an alternative to transfers under paragraph (a) of this section, any UIC permit for a well not injecting hazardous waste may be automatically transferred to a new permittee if:

- (1) The current permittee notifies the Secretary at least 30 days in advance of the proposed transfer date in paragraph (b)(2) of this section;
- (2) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them and the notice demonstrates that the financial responsibility requirements of §122.32(g) will be met by the new permittee; and
- (3) The Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under §122.17. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (b)(2) of this section.

§122.15 Modification or revocation and reissuance of permits.

When the Secretary receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see §122.7), receives a request for modification or revocation and reissuance under §124.5, or conducts a review of the permit file) he or she may determine whether or not one or more of the causes listed in paragraphs (a) and (b) of this section for modification or revocation and reissuance or both exist. If cause exists, the Secretary may modify or revoke and reissue the permit accordingly, subject to the limitations of paragraph (c) of this section, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. See §122.4.5(c). If cause does not exist under this section or §122.17, the Secretary shall not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in §122.17 for "minor modifications" the permit may be modified without a draft permit or public

review. Otherwise, a draft permit must be prepared and other procedures in Part 124 followed.

(a) Causes for modification. The following are causes for modification, but not revocation and reissuance of permits.

(1) Alterations. There are material and substantial alterations or additions to the permitted facility or activity which, occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

(2) Information. The Secretary has received new information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.

(3) New regulations. The standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. Permits may be modified during their terms for this cause only as follows:

(i) For promulgation of amended standards or regulations, when:

(A) The permit condition requested to be modified was based on a promulgated Part 146 regulation; and

(B) DNREC has revised, withdrawn, or modified that portion of the regulation on which the permit condition was based; and

(C) A permittee requests modification in accordance with §124.4 within ninety (90) days after public notice of the action on which the request is based.

(ii) For judicial decisions, a court of competent jurisdiction has remanded and stayed DNREC promulgated regulations, if the remand and stay concern that portion of the regulations on which the permit condition was based and a request is filed by the permittee in accordance with §124.4 within ninety (90) days of judicial remand.

(4) Compliance schedules. The Secretary determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other

events over which the permittee has little or no control and for which there is no reasonably available remedy.

(b) Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit:

(1) Cause exists for termination under §122.16 and the Secretary determines that modification or revocation and reissuance is appropriate.

(2) The Secretary has received notification (as required in the permit, see §122.17) of a proposed transfer of the permit. A permit also may be modified to reflect a transfer after the effective date of an automatic transfer (§122.14(b)) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

(c) Facility siting. Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.

§122.16 Termination of permits.

(a) The Secretary may terminate a permit during its term or deny a permit renewal application for the following causes:

(1) Noncompliance by the permittee with any condition of the permit;

(2) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or

(3) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.

§122.17 Minor modifications of permits.

Upon the consent of the permittee, the Secretary may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of Part 124. Any permit modification not processed as a minor

modification under this section must be made for cause and with Part 124 draft permit and public notice as required in §122.15. Minor modifications may only:

(a) Correct typographical errors;

(b) Require more frequent monitoring or reporting by the permittee;

(c) Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement; or

(d) Allow for a change in ownership or operational control of a facility where the Secretary determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Secretary.

(e)(1) Changes quantities or types of fluids injected which are within the capacity of the facility as permitted and, in the judgement of the Secretary, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification.

(2) Change construction requirements approved by the Secretary pursuant to §122.32(a) (establishing UIC permit conditions), provided that any such alteration shall comply with the requirements of this Part and Part 146.

(3) Amend a plugging and abandonment plan which has been updated under §122.31(e).

§122.19 Confidentiality of information

(a) In accordance with 40 CFR Part 2, any information submitted to DNREC pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, DNREC may make the information available to the public without further notice. If

a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (Public Information).

(b) Claims of confidentiality for the following information will be denied:

- (1) The name and address of any permit applicant or permittee;
- (2) Information which deals with the existence, absence, or level of contaminants in drinking water.

§122.22 Classification of injection wells.

The following classifications apply to Parts 122 and 146:

(a) Class I. (1) Wells used by generators of hazardous wastes or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing within one quarter mile of the well bore, an underground source of drinking water.

(2) Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water.

(b) Class II. Wells used to inject fluids:

(1) Which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.

(2) For enhanced recovery of oil or natural gas; and

(3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

(c) Class III. Wells which inject for extraction of minerals or energy, including:

(1) Mining of sulfur by the Frasch process;

(2) In situ production of uranium or other metals;

(3) Solution mining of salts or potash.

(d) Class IV.

(1) Wells used by generators of hazardous wastes or of radioactive wastes, by owners or operators of hazardous wastes management facilities, or by owners or operators of

radioactive waste disposal sites to dispose of hazardous wastes or radioactive wastes into a formation which within one quarter (1/4) mile of the well contains an underground source of drinking water.

(2) Wells used by generators of hazardous wastes or of radioactive wastes, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one quarter (1/4) mile of the well contains an underground source of drinking water.

(3) Wells used by generators of hazardous wastes or owners or operators of hazardous waste management facilities to dispose of hazardous wastes, which cannot be classified under §122.22(a)(1) or 122.22 (d)(1) and (2) (e.g. wells used to dispose of hazardous wastes into or above a formation which contains an aquifer which has been exempted pursuant to §146.04).

(e) Class V. Injections wells not included in Class I, II, III, or IV. Class V wells include:

(1)(i) Air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling in a heat pump;

(ii) Cooling water return flow wells used to inject water previously used for cooling;

(iii) Drainage wells used to drain surface fluid, primarily storm runoff, into a subsurface formation;

(iv) Recharge wells used to replenish the water in an aquifer;

(v) Salt water intrusion barrier wells used to inject water into a fresh water aquifer to prevent the intrusion of salt water into the fresh water;

(vi) Subsidence control wells (not used for the purpose of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(2)(i) Cesspools including multiple dwelling, community or regional cesspools, or other devices that receive wastes which have an open bottom and sometimes have perforated sides.

The UIC requirements do not apply to single family residential cesspools which receive solely

sanitary wastes and have the capacity to serve fewer than 20 persons a day;

(ii) Septic system wells used to inject the waste or effluent from a multiple dwelling, business establishment, community or regional business establishment septic tank. The UIC requirements do not apply to single family residential septic system wells, nor to non-residential septic system wells which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than 20 persons a day;

(3)(i) Dry wells used for the injection of wastes into a subsurface formation;

(ii) Sand backfill and other backfill wells used to inject a mixture of water and sand, mill tailings or other solids into mined out portions of subsurface mines whether what is injected is a radioactive waste or not;

(iii) Radioactive waste disposal wells other than Class IV;

(iv) Wells used for solution mining of conventional mines such as stopes leaching;

(v) Wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts;

(vi) Injection wells used for in situ recovery of lignite, coal, tar sands, and oil shale;

(4)(i) Injection wells associated with the recovery of geothermal energy for heating, aquaculture and production of electric power;

(ii) Injection wells used in experimental technologies.

§122.23 Prohibition of unauthorized injection; Prohibition of all Class II, III and IV wells; Prohibition of Class I and V wells except as specifically provided.

(a) Any underground injection, except as authorized by permit issued under the UIC program or otherwise authorized herein, is prohibited. The construction of any well required to have a permit is prohibited until the permit is issued.

(b) The construction, use, operation or modification of any Class II, III or IV well as defined in these regulations is hereby expressly prohibited and no permit may be issued for any such activity.

(c) The construction, use, operation or modification of Class I and V wells, as defined in these regulations, is hereby prohibited except as provided in this subsection and subsection (d) below; the following Class I and Class V wells may be permitted upon proper application and review as set forth in these regulations:

(1) Class I wells as defined in §122.22(a)(2) herein;

(2) Class V wells as defined in §122.22(e)(3)(V), (e)(4)(i) and (e)(4)(ii) herein.

(d) The following Class V wells, as defined in §122.22(e)(i) through (e)(vi) herein, are exempt from both the prohibition and UIC permit requirements in (c) above; however, water well allocation permits must be obtained from DNREC in accordance with applicable regulations:

(1) Air conditioning return flow wells (§122.22(e)(1)(i))

(2) Cooling water return flow wells (§122.22(e)(1)(ii))

(3) Drainage wells (§122.22(e)(1)(iii))

(4) Recharge wells (§122.22(e)(1)(iv))

(5) Saltwater intrusion barrier wells (§122.22(e)(1)(v))

(6) Subsidence Control wells (§122.22(e)(1)(vi)).

§122.24 Prohibition of movement of fluid into underground sources of drinking water.

(a) No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 142 or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.

(b) For Class I wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, except as authorized under Part 146, the Secretary shall prescribe such additional requirements for construction, corrective action,

operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by a permit, these additional requirements shall be imposed by modifying the permit in accordance with §124.4, or the permit may be terminated under §124.4 if cause exists, or appropriate enforcement action may be taken if the permit has been violated.

(c) For Class V wells, if at any time the Secretary learns that a Class V well may cause a violation of primary drinking water regulations under 40 CFR Part 142, he or she shall:

(1) Require the injector to obtain an individual permit;

(2) Order the injector to take such actions (including where required closure of the injection well) as may be necessary to prevent the violation; or

(3) Take enforcement action.

(d) Whenever the Secretary learns that a Class V well may be otherwise adversely affecting the health of persons, he or she may prescribe such actions as may be necessary to prevent the adverse effect, including any action authorized under paragraph (c) of this section.

(e) Notwithstanding any other provision of this section, the Secretary may take emergency action upon receipt of information that a contaminant which is present in or is likely to enter a public water system may present an imminent and substantial endangerment to the health of persons.

§122.25 Identification of underground sources of drinking water and exempted aquifers.

(a) The Secretary may identify (by narrative description, illustrations, maps, or other means) and shall protect, except where exempted under paragraph (b) of this section, as an underground source of drinking water, all aquifers or parts of aquifers which meet the definition of an "underground source of drinking water" in §122.3. Even if an aquifer has not been specifically identified by the Secretary, it is an underground source of drinking water if it meets the definition in §122.3.

(b)(1) The Secretary may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the Secretary proposes to designate as exempted aquifers using the criteria in §146.04.

(2) No designation of an exempted aquifer submitted as part of a UIC program shall be final until approved by the Administrator as part of the State program.

(3) Subsequent to program approval, the Secretary may, after notice and opportunity for a public hearing, identify additional exempted aquifers. Exemption of aquifers identified (i) under §146.04(b) shall be treated as a program revision; (ii) under §146.04(c) shall become final if the Secretary submits the exemption in writing to the Administrator and the Administrator has not disapproved the designation within 45 days. Any disapproval by the Administrator shall state the reasons and shall constitute final agency action for purposes of judicial review.

§122.28 Application for a permit; authorization by permit.

(a) Permit application. All underground injections into Class I wells in the State are prohibited unless authorized by permit.

(b) Time to apply. Any person who proposes an underground injection for which a permit is or will be required shall submit an application (Form UIC Application) to the Secretary in a reasonable time before construction is expected to begin.

§122.30 Emergency permits.

(a) Coverage. Notwithstanding any other provision of this Part or Part 124, the Secretary may temporarily permit a specific underground injection which has not otherwise been authorized by rule or permit if:

(1) An imminent and substantial endangerment to the health of persons will result unless a temporary emergency permit is granted.

(b) Requirements for issuance. (1) Any temporary permit under paragraph (a)(1) of this section shall be for no longer term than required to prevent the hazard.

(2) Notice of any temporary permit under this paragraph shall be published in accordance with §124.11 within 5 days of the issuance of the permit.

(3) The temporary permit under this section may be either oral or written. If oral, it must be followed within 5 calendar days by a written temporary emergency permit.

(4) The Secretary shall condition the temporary permit in any manner he or she determines is necessary to ensure that the injection will not result in the movement of fluids into an underground source of drinking water.

§122.31 Additional conditions applicable to all UIC permits.

The following conditions, in addition to those set forth in §122.7, apply to all UIC permits and shall be incorporated into all permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit.

(a) In addition to §122.7(a) (duty to comply): the permittee need not comply with the provisions of this permit to the extent for the duration such noncompliance is authorized in a temporary emergency permit under §122.30.

(b) In addition to §122.7(j)(2) (monitoring and records): the permittee shall retain records concerning the nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified under §122.32(f). The Secretary may require the owner or operator to deliver the records to the Director at the conclusion of the retention period.

(c) In addition to §122.7(1)(1) (notice of planned changes): a new injection well may not commence injection until construction is complete, and

(1) The permittee has submitted notice of completion of construction to the Secretary, and
(2)(i) The Secretary has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or

(ii) The permittee has not received notice from the Secretary of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in paragraph (c)(1) of this section, in which case prior inspection or review is waived and the permittee may commence injection. The Secretary shall include in his notice a reasonable time period in which he shall inspect the well.

(d) The following shall be included as information which must be reported within 24 hours under §122.7(1)(5):

(1) Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW.

(2) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

(e) The permittee shall notify the Secretary at such times as the permit requires before conversion or abandonment of the well or in the case of area permits before closure of the project. With the notice, the permittee shall submit a revised plugging and abandonment plan updated as appropriate in compliance with §122.32(f) and §146.10.

§122.32 Establishing UIC permit conditions.

In addition to the conditions established under §122.8(a), each UIC permit shall include conditions meeting the following requirements, when applicable:

(a) Construction requirements as set forth in Part 146. The owner or operator of a proposed new injection well shall submit plans for testing, drilling, and construction as part of the permit application. No construction may commence until a permit has been issued containing construction requirements (see §122.23). New wells shall be in compliance with these requirements prior to commencing injection operations. Changes in construction plans during construction may be approved by the Director as minor modifications (§122.17). No such changes may be physically incorporated into construction of the well prior to approval of the modification by the Director.

(b) Corrective action as set forth in §122.34 and §146.7.

(c) Operation requirements as set forth in Part 146; the permit shall establish any maximum injection volumes and/or pressures necessary to assure that fractures are not initiated in the confining zone, that injected fluids do not migrate into any underground source of drinking water, that formation fluids are not displaced into any underground source of drinking water, and to assure compliance with the Part 146 operating requirements.

(d) Monitoring and reporting requirements as set forth in Part 146. The permittee shall be required to identify types of tests and methods used to generate the monitoring data.

(e) Plugging and abandonment. Any Class I permit shall include, and any Class V permit may include, conditions to ensure that plugging and abandonment of the well will not allow the movement of fluids either into an underground source of drinking water or from one underground source of drinking water to another. Any applicant for a UIC permit shall be required to submit a plan for plugging and abandonment. Where the plan meets the requirements of this paragraph, the Secretary shall incorporate it into the permit as a condition. Where the Secretary's review of an application indicates that the permittee's plan is inadequate, the Secretary shall require the applicant to revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the application. For purposes of this paragraph, temporary intermittent cessation of injection operations is not abandonment.

(f) Financial responsibility. The permit shall require the permittee to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Secretary. The permittee must show evidence of financial responsibility to the Secretary by submission of surety bond, or other adequate assurance, such as financial statements or other materials acceptable to the Secretary.

(g) Mechanical integrity. A permit for any Class I well or injection project which lacks mechanical integrity shall include, and for any Class V well may include, a condition

prohibiting injection operations until the permittee shows to the satisfaction of the Secretary under §146.08 that the well has mechanical integrity.

(h) Additional conditions. The Secretary shall impose on a case-by-case basis such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water.

§122.33 Waiver of requirements by Director.

(a) When injection does not occur into, through or above an underground source of drinking water, the Secretary may authorize a well or project with less stringent requirements for area of review, construction, mechanical integrity, operation, monitoring, and reporting than required in Part 146 or §122.32 to the extent that the reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water.

(b) When injection occurs through or above an underground source of drinking water, but the radius of endangering influence when computed under §146.06(a) is smaller or equal to the radius of the well, the Secretary may authorize a well or project with less stringent requirements for operation, monitoring, and reporting than required in Part 146 or §122.32 to the extent that the reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water.

(c) When reducing requirements under paragraph (a) or (b) of this section, the Secretary shall prepare a fact sheet under State procedures explaining the reasons for the action.

§122.34 Corrective action.

(a) Coverage. Applicants for Class I injection well permits shall identify the location of all known wells within the injection well's area of review which penetrate the injection zone. For such wells which are improperly sealed, completed, or abandoned, the applicant shall also submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluid into underground sources of drinking water ("corrective action"). Where the plan is adequate, the Secretary shall incorporate

it into the permit as a condition. Where the Secretary's review of an application indicates that the permittee's plan is inadequate (based on the factors in §146.07), the Secretary shall require the applicant to revise the plan, prescribe a plan for corrective action as a condition of the permit under paragraph (b) of this section, or deny the application.

(2) New injection wells. No permit for a new injection well may authorize injection until all required corrective action has been taken.

(3) Injection pressure limitation. The Secretary may require as a permit condition that injection pressure be so limited that pressure in the injection zone does not exceed hydrostatic pressure at the site of any improperly completed or abandoned well within the area of review. This pressure limitation shall satisfy the corrective action requirement. Alternatively, such injection pressure limitation can be part of a compliance schedule and last until all other required corrective action has been taken.

PART 124 -- PROCEDURES FOR DECISIONMAKING

Subpart A -- General Program Requirements

Sec.

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- 124.15 Appeal of UIC permits.
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Authority: Delaware Environmental Protection Act, 7 Del. C. Ch. 60.

Subpart A -- General Program Requirements

§124.1 Purpose and scope.

(a) This Part contains DNREC procedures for issuing, modifying, revoking and reissuing, or terminating all UIC "permits" other than UIC "emergency permits" (see §122.30). The latter kind of permits are governed by Subpart A of Part 122. UIC authorization by rule are not "permits" and are covered by specific provisions in Subpart A of Part 122.

(b) Subpart A describes the steps DNREC will follow in receiving permit applications, preparing draft permits, issuing public notice, inviting public comment and holding public hearings on draft permits. Subpart A also covers assembling an administrative record, responding to comments, issuing a final permit decision, and allowing for administrative appeal of the final permit decision.

(c) Part 124 offers an opportunity for a public hearing under Subpart A.

(d) To coordinate decisionmaking when different permits will be issued by EPA and approved State programs, this Part allows applications to be jointly processed, joint comment periods and hearings to be held, and final permits to be issued on a cooperative basis whenever EPA and a State agree to take such steps in general or in individual cases. These joint processing agreements may be provided in Memorandum of Agreement.

§124.3 Application for a permit.

(a)(1) Any person who requires a permit under the UIC program shall complete, sign, and submit to the Secretary an application for each permit required under §122.21.

(2) The Secretary shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. See §122.4, and 122.28.

(3) Permit applications must comply with the signature and certification requirements of §122.6.

§124.4 Modification, revocation and reissuance, or termination of permits.

(a) Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Secretary's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in §122.15 or 122.16. All requests shall be in writing and shall contain facts or reasons supporting the request.

(b) If the Secretary decides the request is not justified, he or she shall send the requested a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings.

(c)(1) If the Secretary tentatively decides to modify or revoke and reissue a permit under §122.15, he or she shall prepare a draft permit under §124.5 incorporating the proposed changes. The Secretary may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, the Secretary shall require the submission of a new application.

(2) In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.

(3) "Minor modifications" as defined in §122.17 are not subject to the requirements of this section.

(d) If the Secretary tentatively decides to terminate a permit under §122.16, he or she shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under §124.5.

§124.5 Draft permits.

(a) Once an application is complete, the Secretary shall tentatively decide whether to prepare a draft permit or to deny the application.

(b) If the Secretary tentatively decides to deny the permit application, he or she shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section.

See §124.5(d). If the Secretary's final decision (§124.12) is that the tentative decision to deny the permit application was incorrect, he or she shall withdraw the notice of intent to deny and proceed to prepare a draft permit under paragraph (c) of this section.

(c) If the Secretary decides to prepare a draft permit, he or she shall prepare a draft permit that contains the following information:

- (1) All conditions under §§122.7 and 122.8;
- (2) All compliance schedules under §122.10;
- (3) All monitoring requirements under §122.11;
- (4) Permit conditions under §122.32.

(d) Draft permits prepared by a State shall be accompanied by a fact sheet if required under §124.6.

§124.6 Fact sheet.

(a) A fact sheet shall be prepared for every draft permit for a major UIC facility or activity, and for every draft permit which the Director finds is the subject of widespread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Secretary shall send this fact sheet to the applicant and, on request, to any other person.

(b) The fact sheet shall include, when applicable:

- (1) A brief description of the type of facility or activity which is the subject of the draft permit;
- (2) The type and quantity of fluids which are proposed to be or are being injected.
- (3) Reasons why any requested variances or alternatives to required standards do or do not appear justified;

(4) A description of the procedures for reaching a final decision on the draft permit including:

- (i) The beginning and ending dates of the comment period under §124.7 and the address where comments will be received;
 - (ii) Procedures for requesting a hearing and the nature of that hearing; and
 - (iii) Any other procedures by which the public may participate in the final decision.
- (5) Name and telephone number of a person to contact for additional information.

§124.7 Public notice of permit actions and public comment period.

(a) Scope.

(1) The Secretary shall give public notice that the following actions have occurred:

- (i) A permit application has been tentatively denied under §124.5(b);
 - (ii) A draft permit has been prepared under §124.5(c);
 - (iii) A hearing has been scheduled under §124.9;
 - (iv) An appeal has been granted under §124.15(c);
- (2) No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under §124.4(b). Written notice of that denial shall be given to the requester and to the permittee.
- (3) Public notices may describe more than one permit or permit action.

(b) Timing. (1) Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under paragraph (a) of this section shall allow at least 30 days for public comment.

(2) Public notice of a public hearing shall be given at least 30 days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)

(c) Methods. Public notice of activities described in paragraph (a)(1) of this section shall be given by the following methods:

(1) By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this paragraph may waive his or her rights to receive notice for any classes and categories of permits):

- (i) The applicant;
 - (ii) Any other agency which the Director knows has issued or is required to issue a permit for the same facility or activity;
 - (iii) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, State Historic Preservation Officers, and other appropriate government authorities, including any affected States;
 - (iv) Persons on a mailing list developed by:
 - (A) Including those who request in writing to be on the list;
 - (B) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and
 - (C) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. (The Secretary may update the mailing list from time to time by requesting written indication of continued interest from those listed. The Secretary may delete from the list the name of any person who fails to respond to such a request.)
 - (2) When the program is being administered by an approved State, in a manner constituting legal notice to the public under State law; and
 - (3) Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.
- (d) Contents. (1) All public notices. All public notices issued under this Part shall contain the following minimum information:
- (i) Name and address of the office processing the permit action for which notice is being given;
 - (ii) Name and address of the permittee or permit applicant.
 - (iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit,
 - (iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of

the draft permit or draft general permit, as the case may be, statement of basis or fact sheet, and the application; and

(v) A brief description of the comment procedures required by §§124.8 and 124.9 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision.

(vi) Any additional information considered necessary or proper.

(2) Public notices for hearings. In addition to the general public notice described in paragraph (d)(1) of this section, the public notice of a hearing under §124.12, shall contain the following information:

(i) Reference to the date of previous public notices relating to the permit;

(ii) Date, time, and place of the hearing;

(iii) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures; and

(e) In addition to the general public notice described in paragraph (d)(1) of this section, all persons identified in paragraphs (c)(1)(i), (ii), and (iii) of this section shall be mailed a copy of the permit application (if any) and the draft permit (if any).

§124.8 Public comments and requests for public hearings.

During the public comment period provided under §124.7, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in §124.14.

§124.9 Public hearings.

(a) The Secretary shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest

in a draft permit(s). The Secretary also may hold a public hearing at his or her discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision. Public notice of the hearing shall be given as specified in §124.7.

(b) Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under §124.7 shall automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing.

(c) A tape recording or written transcript of the hearing shall be made available to the public.

§124.10 Obligation to raise issues and provide information during the public comment period.

All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Secretary's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, must raise all reasonable ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period (including any public hearing) under §124.7. All supporting materials shall be included in full and may not be incorporated by reference, unless they consist of State or Federal statutes and regulations, EPA documents of general applicability, or other generally available reference materials.

§124.11 Reopening of the public comment period.

(a) If any data information or arguments submitted during the public comment period, including information or arguments required under §124.10, appear to raise substantial new questions concerning a permit, the Secretary may take one or more of the following actions:

- (1) Prepare a new draft permit, appropriately modified, under §124.5;
 - (2) Prepare a fact sheet or revised fact sheet under §124.6 and reopen the comment period under §124.11; or
 - (3) Reopen or extend the comment period under §124.7 to given interested persons an opportunity to comment on the information or arguments submitted.
- (b) Comments filed during the reopened comment period shall be limited to the substantial new questions that caused its reopening. The public notice under §124.7 shall define the scope of the reopening.
- (c) Public notice of any of the above actions shall be issued under §124.7.

§124.12 Issuance and effective date of permit.

- (a) After the close of the public comment period under §124.7 on a draft permit, the Secretary shall issue a final permit decision. The Secretary shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision on a permit. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.
- (b) A final permit decision shall become effective 30 days after the service of notice of the decision under paragraph (a) of this section, unless:
- (1) A later effective date is specified in the decision; or
 - (2) Review is requested under §124.15; or
 - (3) No comments requested a change in the draft permit, in which case the permit shall become effective immediately upon issuance.

§124.13 Says of contested permits conditions.

- (a) Stays. (1) If a request for review of a UIC permit under §124.15 is granted, the effect of the contested permit conditions shall be stayed and shall not be subject to judicial review pending final agency action. If the permit involves a new injection well the applicant shall be without a

permit for the proposed new injection well pending final agency action.

- (2) Uncontested conditions which are not severable from those contested shall be stayed together with the contested conditions. Stayed provisions of permits for existing injection wells shall be identified by the Secretary. All other provisions of the permit for the existing injection well shall remain fully effective and enforceable.
- (b) Stays based on cross effects.

(1) A stay may be granted based on the grounds that an appeal to the Secretary under §124.15 of one permit may result in changes to another permit only when each of the permits involved has been appealed to the Secretary and he or she has accepted each appeal.

(c) Any facility or activity holding an existing permit must:

- (1) Comply with the conditions of that permit during any modification or revocation and reissuance proceeding under §124.4; and
- (2) To the extent conditions of any new permit are stayed under this section, comply with the conditions of the existing permit which correspond to the stayed conditions, unless compliance with the existing conditions would be technologically incompatible with compliance with other conditions of the new permit which have not been stayed.

§124.14 Response to comments.

- (a) At the time that any final permit decision is issued under §124.12, the Secretary shall issue a response to comments. States are only required to issue a response to comments when a final permit is issued. This response shall:
- (1) Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and
 - (2) Briefly describe and respond to all significant comments on the draft permit raised during the public comment period, or during any hearing.
- (b) The response to comments shall be available to the public.

§124.15 Appeal of UIC permits.

(a) Within 30 days after a UIC, final permit decision has been issued under §124.12, any person who filed comments on that draft permit or participated in the public hearing may petition the Secretary to review any condition of the permit decision. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may petition for administrative review only to the extent of the changes from the draft to the final permit decision. The 30-day period within which a person may request review under this section begins with the service of notice of the Secretary's action unless a later date is specified in that notice. The petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period (including any public hearing) to the extent required by these regulations and when appropriate, a showing that the condition in question is based on:

- (1) A finding of fact or conclusion of law which is clearly erroneous, or
 - (2) An exercise of discretion or an important policy consideration which the Secretary should, in his or her discretion, review.
- (b) The Secretary may also decide on his or her initiative to review any condition of any UIC permit issued under this Part. The Secretary must act under this paragraph within 30 days of the service date of notice of the Secretary's action.
- (c) Within a reasonable time following the filing of the petition for review, the Secretary shall issue an order either granting or denying the petition for review. To the extent review is denied, the conditions of the final permit decision become final agency action. Public notice of any grant of review by the Secretary under paragraph (a) or (b) of this section shall be given as provided in §124.7. Public notice shall set forth a briefing schedule for the appeal and shall state that any interested person may file an amicus brief. Notice of denial or review shall be sent only to the person(s) requesting review.
- (d) A petition to the Secretary under paragraph (a) of this section is a prerequisite to the seeking of judicial review of the final agency action.

(e)(1) For purposes of judicial review under the appropriate Act, final agency action occurs when a final UIC permit is issued or denied by the State and agency review procedures are exhausted. A final permit decision shall be issued by the Secretary: (i) When the Secretary issues notice to the parties that review has been denied; (ii) When the Secretary issues a decision on the merits of the appeal and the decision does not include a remand of the proceedings; or (iii) upon the completion of remand proceedings if the proceedings are remanded, unless the Secretary's remand order specifically provides that appeal of the remand decision will be required to exhaust administrative remedies.

§124.16 Computation of time.

- (a) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.
- (b) Any time period schedule to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.
- (c) If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day.
- (d) Whenever a party or interested person has the right or is required to act within a prescribed period after the service of notice or other paper upon him or her by mail, 3 days shall be added to the prescribed time.

PART 146 -- UNDERGROUND INJECTION CONTROL PROGRAM: CRITERIA AND STANDARDS

Subpart A -- General Provisions

Sec.

- 146.01 Applicability and scope.
- 146.04 Criteria for exempted aquifers.
- 146.06 Area of review.
- 146.07 Corrective action.
- 146.08 Mechanical integrity.
- 146.10 Plugging and abandoning Class I wells.

Subpart B -- Criteria and Standards Applicable to Class I Wells

- 146.11 Applicability.
- 146.12 Construction requirements.
- 146.13 Operating, monitoring and reporting requirements.
- 146.14 Information to be considered by the Secretary.

- 146.41 Applicability.

Authority: Delaware Environmental Protection Act, 7 Del. C. Ch. 60.

Subpart A -- General Provisions

§146.01 Applicability and scope.

- (a) This Part set forth technical criteria and standards for the Underground Injection Control Program. This part should be read in conjunction with Parts 122, and 124. Part 122 defines the regulatory framework of State administered permit programs. Part 124 describes the procedures the Agency will use for issuing permits under the program.
- (b) Upon the approval of a State UIC program by the Administrator, any underground injection which is not authorized by the Secretary by rule or by permit is unlawful.

§146.04 Criteria for exempted aquifers.

An aquifer or a portion thereof which meets the criteria for an "underground source of drinking

water" in §122.3 may be determined under §122.25 to be an "exempted aquifer" if it meets the following criteria:

- (a) It does not currently serve as a source of drinking water; and
- (b) It cannot now and will not be in the future serve as a source of drinking water because:
 - (1) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;
 - (2) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or
- (c) The Total Dissolved Solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

§146.06 Area of Review.

The area of review for each injection well shall be determined according to either paragraph (a) or (b) of this section. The Secretary may solicit input from the owners or operators of injection wells within the State as to which method is most appropriate for each geographic area or field.

- (a) Fixed Radius. In the case of application(s) for well permit(s) under §122.28 a fixed radius around the well of not less than one-fourth (1/4) mile may be used. In determining the fixed radius, the following factors shall be taken into consideration: chemistry of injected and formation fluids; hydrogeology; population and ground-water use and dependence; and historical practices in the area.
- (b) If the area of review is determined by a mathematical model pursuant to paragraph (a) of this section, the permissible radius is the result of such calculation even if it is less than one-fourth (1/4) mile.

§146.07 Corrective Action.

In determining the adequacy of corrective action proposed by the applicant under sec. 122.34 and in determining the additional steps needed to prevent fluid movement into underground

sources of drinking water, the following criteria and factors shall be considered by the Secretary:

- (a) Nature and volume of injected fluid;
- (b) Nature of native fluids or byproducts of injection;
- (c) Potentially affected population;
- (d) Geology;
- (e) Hydrology;
- (f) History of the injection operation;
- (g) Completion and plugging records;
- (h) Abandonment procedures in effect at the time the well was abandoned; and
- (i) Hydraulic connections with underground sources of drinking water.

§146.08 Mechanical Integrity

- (a) An injection well has mechanical integrity if:
 - (1) There is no significant leak in the casing, tubing, or packer; and
 - (2) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore.
- (b) One of the following methods must be used to evaluate the absence of significant leaks under paragraph (a)(1) of this section:
 - (1) Monitoring of annulus pressure; or
 - (2) Pressure test with liquid or gas;
- (c) The results of a temperature or noise log must be used to determine the absence of significant fluid movement under paragraph (a)(2) of this section.
- (d) The Secretary may allow the use of a test to demonstrate mechanical integrity other than those listed in paragraphs (b) and (c)(2) of this section with the written approval of the Administrator. To obtain approval, the Secretary shall submit a written request to the Administrator, which shall set forth the proposed test and all technical data supporting its use. The Administrator shall approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the Administrator shall be published in the Federal Register.
- (e) In conducting and evaluating the tests enumerated in this section or others to be

allowed by the Secretary, the owner or operator and the Secretary shall apply methods and standards generally accepted in the industry. When the owner or operator reports the results of mechanical integrity tests to the Secretary, he shall include a description of the test(s) and the method(s) used. In making his/her evaluation, the Secretary shall review monitoring and other test data submitted since the previous evaluation.

§146.10 Plugging and Abandoning Class I Wells.

- (a) Prior to abandoning Class I wells the well shall be plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water.
- (b) Placement of the cement plugs shall be accomplished by one of the following:
 - (1) The Balance Method;
 - (2) The Dump Bailer Method; or
 - (3) The Two-Plug Method;
 - (4) or an alternative method approved by the Secretary, which will reliably provide a comparable level of protection to underground sources of drinking water.
- (c) The well to be abandoned shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Secretary, prior to the placement of the cement plug(s).

Subpart B -- Criteria and Standards Applicable to Class I Wells

§146.11 Applicability.

This subpart establishes criteria and standards for underground injection control programs to regulate Class I wells. All Class I injection wells listed under §122.22 (a)(1) are prohibited from being permitted in the State.

§146.12 Construction Requirements.

- (a) All Class I wells as established under §122.22 (a)(2) shall be sited in such a fashion that they inject into a formation which is beneath

the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water.

(b) All Class I wells as established under §122.22 (a)(2) shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, the following factors shall be considered:

- (1) Depth to the injection zone;
- (2) Injection pressure, external pressure, internal pressure, and axial loading;
- (3) Hole size;
- (4) Size and grade of all casing strings (wall thickness, diameter, nominal weight, length, joint specification, and construction material);
- (5) Corrosiveness of injected fluid, formation fluids, and temperatures;
- (6) Lithology of injection and confining intervals; and

(7) Type or grade of cement;

(c) All Class I injection wells as established under §122.22 (a)(2) shall inject fluids through tubing with a packer set immediately above the injection zone, or tubing with an approved fluid seal as an alternative. The tubing, packer, and fluid seal shall be designed for the expected service.

(1) The use of other alternatives to a packer may be allowed with the written approval of the Secretary. To obtain approval, the operator shall submit a written request to the Secretary, which shall set forth the proposed alternative and all technical data supporting its use. The Secretary shall approve the request if the alternative method will reliably provide a comparable level of protection to underground sources of drinking water. The Secretary may approve an alternative method solely for an individual well or for general use.

(2) In determining and specifying requirements for tubing, packer, or alternatives, the following factors shall be considered:

- (i) Depth of setting;
- (ii) Characteristics of injection fluid (chemical content, corrosiveness, and density);
- (iii) Injection pressure;

(iv) Annular pressure;

(v) Rate, temperature and volume of injected fluid; and

(vi) Size of casing.

(d) Appropriate logs and other tests shall be conducted during the drilling and construction of new Class I wells. A descriptive report interpreting the results of such logs and tests shall be prepared by a knowledgeable log analyst and submitted to the Secretary. At a minimum, such logs and tests shall include:

(1) Deviation checks on all holes constructed by first drilling a pilot hole, and then enlarging the pilot hole by reaming or another method. Such checks shall be at sufficiently frequent intervals to assure that vertical avenues for fluid migration in the form of diverging holes are not created during drilling.

(2) Such other logs and tests as may be needed after taking into account the availability of similar data in the area of the drilling site, the construction plan, and the need for additional information, that may arise from time to time as the construction of the well progresses. In determining which logs and tests shall be required, the following logs shall be considered for use in the following situations:

(i) For surface casing intended to protect underground sources of drinking water:

- (A) Resistivity, spontaneous potential, and caliper logs before the casing is installed; and
- (B) A cement bond, temperature, or density log after the casing is set and cemented.

(ii) For intermediate and log strings of casing intended to facilitate injection:

- (A) Resistivity, spontaneous potential, porosity, and gamma ray logs before the casing is installed;
- (B) Fracture finder logs; and
- (C) A cement bond, temperature, or density log after the casing is set and cemented.

(e) At a minimum, the following information concerning the injection formation shall be determined or calculated for new Class I wells:

- (1) Fluid pressure;
- (2) Temperature;
- (3) Fracture pressure;
- (4) Other physical and chemical characteristics of the injection matrix; and

(5) Physical and chemical characteristics of the formation fluids.

§146.13 Operating, Monitoring and Reporting Requirements

(a) Operating Requirements. Operating requirements shall, at a minimum, specify that:

(1) Except during stimulation injection pressure at the wellhead shall not exceed a maximum which shall be calculated so as to assure that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the injection zone. In no case shall injection pressure initiate fractures in the confining zone or cause the movement of injection or formation fluids into an underground source of drinking water.

(2) Injection between the outermost casing protecting underground sources of drinking water and the well bore is prohibited.

(3) Unless an alternative to a packer has been approved under §146.12(c), the annulus between the tubing and the long string of casings shall be filled with a fluid approved by the Secretary and a pressure, also approved by the Secretary shall be maintained on the annulus.

(b) Monitoring Requirements. Monitoring requirements shall, at a minimum, include:

(1) The analysis of the injected fluids with sufficient frequency to yield representative data of their characteristics;

(2) Installation and use of continuous recording devices to monitor injection pressure, flow rate and volume, and the pressure on the annulus between the tubing and the long string of casing;

(3) A demonstration of mechanical integrity pursuant to §146.08 at least once every five years during the life of the well; and

(4) The type, number and location of wells within the area of review to be used to monitor any migration of fluids into and pressure in the underground sources of drinking water, the parameters to be measured and the frequency of monitoring.

(c) Reporting Requirements. Reporting requirements shall, at a minimum, include:

(1) Quarterly reports to the Secretary on:

(i) The physical, chemical and other relevant characteristics of injection fluids;

(ii) Monthly average, maximum and minimum values for injection pressure, flow rate and volume, and annular pressure; and

(iii) The results of monitoring prescribed under subparagraph (b)(4) of this section.

(2) Reporting the results, with the first quarterly report after the completion, of:

(i) Periodic tests of mechanical integrity;

(ii) Any other test of the injection well conducted by the permittee if required by the Secretary, and

(iii) Any well workover.

§146.14 Information to be Considered by the Secretary.

This section sets forth the information which must be considered by the Secretary in authorizing Class I wells. For a newly drilled Class I well, the Secretary shall require the submission of all the information listed below. For Class I wells certain maps, cross-sections, tabulations of wells within the area of review and other data may be included in the application by reference provided they are current, readily available to the Secretary (for example, in the permitting agency's files) and sufficiently identified to be retrieved.

(a) Prior to the issuance of a permit for the construction of a Class I well the Secretary shall consider the following:

(1) Information required in §§122.4;

(2) A map showing the injection well(s) for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number, or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells and other pertinent surface features including residences and roads. The map should also show faults, if known or suspected. Only information of public record is required to be included on this map;

(3) A tabulation of data on all wells within the area of review which penetrate into the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging

and/or completion, and any additional information the Secretary may require;

(4) Maps and cross sections indicating the general vertical and lateral limits of all underground sources of drinking water within the area of review, their position relative to the injection formation and the direction of water movement, where known, in each underground source of drinking water which may be affected by the proposed injection;

(5) Maps and cross sections detailing the geologic structure of the local area;

(6) Generalized maps and cross sections illustrating the regional geologic setting;

(7) Proposed operating data:

(i) Average and maximum daily rate and volume of the fluid to be injected;

(ii) Average and maximum injection pressure; and

(iii) Source and an analysis of the chemical, physical, radiological and biological characteristics of injection fluids;

(8) Proposed formation testing program to obtain an analysis of the chemical, physical and radiological characteristics of other information on the receiving formation;

(9) Proposed stimulation program;

(10) Proposed injection procedure;

(11) Schematic or other appropriate drawings of the surface and subsurface construction details of the well.

(12) Contingency plans to cope with all shut-ins or well failures so as to prevent migration of fluids into any underground source of drinking water;

(13) Plans (including maps) for meeting the monitoring requirements in §146.13(b);

(14) For wells within the area of review which penetrate the injection zone but are not properly completed or plugged, the corrective action proposed to be taken under §122.34;

(15) Construction procedures including a cementing and casing program, logging procedures, deviation checks, and a drilling, testing, and coring program; and

(16) A certificate that the applicant has assured, through a performance bond or other appropriate means, the resources necessary to close, plug or abandon the well as required by §122.32(g).

(b) Prior to granting approval for the operation of a Class I well the Secretary shall consider the following information:

- (1) All available logging and testing program data on the well;
- (2) A demonstration of mechanical integrity pursuant to §146.08;
- (3) The anticipated maximum pressure and flow rate at which the permittee will operate;
- (4) The results of the formation testing program;
- (5) The actual injection procedure;
- (6) The compatibility of injected waste with fluids in the injection zone and minerals in both the injection zone and the confining zone; and
- (7) the status of corrective action on defective wells in the area of review.

(c) Prior to granting approval for the plugging and abandonment of a Class I well the Director shall consider the following information:

- (1) The type and number of plugs to be used;
- (2) The placement of each plug including the elevation of the top and bottom;
- (3) The type and grade and quantity of cement to be used;
- (4) The method for placement of the plugs; and
- (5) The procedure to be used to meet the requirements of §146.10(c).

EQUIVALENT OF
STATE OF DELAWARE UIC REGULATIONS (SDR)
TO
CODE OF FEDERAL REGULATIONS (CFR)

PART 122

SDR

CFR

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124.5 (a) thru (d) Resp.
124.6 (a), (b), (d), (e) Resp.
124.8 (a), (b)(1), (b)(2), (b)(5),
(b)(6), (b)(7) Resp.
124.10 (a)(1)(i) thru (a)(1)(iv) Resp.
(a)(2), (a)(3) Resp.
(b)(1), (b)(2) Resp.
(c)(1)(i) thru (c)(1)(iii) Resp.
(c)(1)(viii)(A) thru
(c)(1)(viii)(C) Resp.
(c)(2), (c)(3) Resp.
(d)(1)(i) thru (d)(1)(v) Resp.
(d)(1)(ix)
(d)(2)(i) thru (d)(2)(iii), (e) Resp.

124.11
124.12 (a), (c) thru (e) Resp.
124.13
124.14 (a)(1) thru (a)(3) Resp.
(b), (d) Resp.
124.15 (a), (b)(1) thru (b)(3) Resp.
124.16 (a)(1), (a)(2), (b)(1) Resp.
(c)(1), (c)(2) Resp.
124.17 (a)(1), (a)(2), (c) Resp.
124.19 (a)(1), (a)(2), (b), (c) Resp.
(e), (f)(1), (f)(2) Resp.
124.20 (a) thru (d) Resp.

PART 146

SDR

CFR

Subpart A.

Sec.

146.01 (a), (b)
146.04 (a), (b)(1) and (b)(2), (c)
146.06 (a) and (b)
146.07
146.08
146.09
146.10

Subpart B.

Sec.

146.11
 (a), (b)
146.12 (a) thru (e)
146.13 (a) thru (c)
146.14 (a) thru (c)

Subpart A.

Sec.

146.01 (a), (b) Resp.
146.04 (a), (b)(1) thru (b)(4), (c) Resp.
146.06 (a) thru (c) Resp.
146.07
146.08
146.09
146.10

Subpart B.

Sec.

146.11
146.12 (a) thru (e) Respectively
146.13 (a) thru (c) Respectively
146.14 (a) thru (c) Respectively